

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 1. This sheet, which includes Figure 1, replaces the original sheet including Figure 1. In Figure 1, the font size has been increased to make it clearly legible. Also included is a formal drawing of Figure 2 to replace the original sheet including Figure 2.

REMARKS

Favorable consideration and allowance of all pending claims in view of the preceding amendment and the following remarks is respectfully requested.

Claims 1-79 are pending. By this Amendment, Claims 22-46, 50, 51, 55, 56, 65, 69 and 73, which were withdrawn from consideration due to a restriction/election requirement, have been canceled herein without prejudice. Applicant respectfully reserves the right to file one or more divisional applications to Claims 22-46, 50, 51, 55, 56, 65, 69 and 73. Accordingly, Claims 1-21, 47-49, 52-54, 57-64, 66-68, 70-72 and 74-79 are now under examination in this case. It is believed that the claims as presented herein places the application in condition for allowance.

In the Office Action, the Examiner has noted that the Information Disclosure Statement filed on March 11, 2005 failed to comply with 37 C.F.R. §1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Specifically, the Examiner maintains that reference DE 1645259 has not been considered because no copy thereof has been provided. Applicant respectfully submits that it is believed that a copy of DE 1645259 along with the english equivalent thereof (i.e., GB 1,031,140) was submitted with the Information Disclosure Statement dated March 11, 2005. However, to ensure that this reference is considered, a copy of both DE 1645259 and GB 1,031,140 is attached herewith. Accordingly, it is respectfully requested that the Examiner reconsider this reference.

The Examiner has also noted that the Information Disclosure Statement filed on March 11, 2005 failed to comply with 37 C.F.R. §1.98(a)(3), because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 C.F.R. §1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, it is the Examiner's belief that no explanation of the relevance of foreign language references EP 658572 and DE 2014475 have been provided and therefore these references have not been considered. Applicant respectfully submits that the International Search Report included with the Information Disclosure Statement filed on March 11, 2005 fully explains the relevance of foreign language references EP 658572 and DE 2014475. Accordingly, it is believed that Applicant has fully complied with the requirement of 37 C.F.R. §1.98(a)(3). Thus, it is respectfully requested that the Examiner reconsider each of these references.

The Examiner has objected to the drawings as having font size too small to make it clearly legible. Applicants attach herein formal sheets of Figures 1 and 2, thus believed to obviate the rejection. Accordingly, withdrawal of the objection is respectfully requested.

The Examiner has rejected Claims 1, 2 and 9-21 under 35 U.S.C. §102 (e) as being anticipated by Harrison et al. U.S. Patent No. 6,451,920 ("Harrison").

Harrison discloses copolymerizing (1) a polyalkene containing alkylvinylidene isomer and non-alkylvinylidene isomers and (2) an unsaturated acidic reagent under polymerization conditions in the presence of a free radical initiator; and (b) reacting the product of step (a) with an unsaturated acidic reagent at elevated temperature in the presence of a strong acid to form a polyPIBSA/acid-catalyzed thermal PIBSA mixture. Harrison further discloses reacting the

polyPIBSA/acid-catalyzed thermal PIBSA mixture with (1) an amine to form a succinimide or (2) with a polyol to form a polyester.

In contrast to the presently claimed invention, Harrison fails to disclose an esterified copolymer obtained from a reaction product of maleic anhydride/polybutene copolymer and pentaerythritol as essentially recited as the species of Claim 1. The copolymer is obtained by reacting polyisobutylene with maleic anhydride in the presence of an initiator, such as di-t-butyl peroxide, and removing any unreacted maleic anhydride, which is then further reacted with a polyol such as pentaerythritol to form an esterified copolymer. Accordingly, the polyester obtained from the reaction product of Harrison is different than the esterified copolymer obtained from the recited reaction product set forth in the present claims. The copolymer recited in the present claims does not have an acid-catalyzed thermal PIBSA component.

In the Office Action, the Examiner alleges that “the reference shows in Examples 1-5 a copolymer of high methylvinylidene polyisobutylene and maleic anhydride with succinic ratios of 1.06 or 1.07”. The Examiner further alleges that [a]lthough the reference does not include a working example of an esterified product, the reference clearly suggests this embodiment at col. 7, line 46 through col. 8, line 14. This wholly unsupported basis cannot possibly provide a basis for this rejection.

It is well established that for a claim to be anticipated a single prior art reference must disclose each and every element of the claimed invention. *Lewmar Marine, Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 USPQ2d 1766, (Fed. Cir. 1987). Harrison is concerned with improving the conversion of the polybutene starting material and improve raw material utilization, by *further reacting* a polyPIBSA reaction mixture with an unsaturated acidic reagent in the presence of a

strong acid catalyst, such as a sulfonic acid catalyst, so that the unreacted polybutene can be converted to a polyisobutenyl succinic anhydride. In this manner, up to 90-95% conversion of the starting polybutene can be achieved and a mixture of polyPIBSA and acid-catalyzed thermal PIBSA is formed. This is illustrated in Examples 6 and 7 of Harrison where the copolymer of high methylvinylidene polyisobutylene and maleic anhydride formed in Examples 1 and 5 is further reacted with maleic anhydride and alkylbenzene sulfonic acid to form a polyPIBSA/acid-catalyzed thermal PIBSA mixture. The polyPIBSA/acid-catalyzed thermal PIBSA mixture of Harrison may be further reacted with a polyol to form a polyester which is completely different than the esterfied copolymer obtained from the recited reaction product as set forth in the present claims. In fact, column 7, lines 46 through column 8, line 14 of Harrison specifically discloses that the polyesters can be prepared by reacting the polyPIBSA/acid-catalyzed thermal PIBSA mixture produced by the present invention with a polyol. Thus, at no point is there any disclosure in Harrison of the recited esterfied copolymer obtained from a reaction product of maleic anhydride/polybutene copolymer and a polyol such as pentaerythritol.

Accordingly, since Harrison does not disclose an esterfied copolymer obtained from the recited reaction product as presently set forth in Claim 1, Claims 1, 2 and 9-21 are not anticipated by Harrison. Thus, withdrawal of the rejection is respectfully requested.

The Examiner has rejected Claims 3-8, 47-49, 52-54, 57-64, 66-68, 70-72 and 74-79 under 35 U.S.C. §103 (a) as being obvious over Harrison.

It is submitted that Harrison is not prior art, as stated under 35 U.S.C. 103(c) and also MPEP §706.02(l)(1). That section of the statute states, in part:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed inventions were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

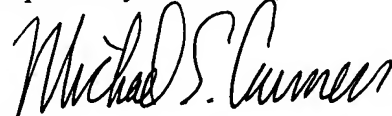
The MPEP section states that the above-quoted 35 U.S.C. §103(c) applies to all utility, design and plant patent applications filed on or after November 29, 1999.

The present application was filed on June 27, 2003. Furthermore, the present application was, at the time the invention was made, subject to an obligation of assignment and was assigned to Chevron Oronite Company, CA, also the assignee of Harrison (as evidenced by the Contribution Agreement between Chevron Chemical Company LLC and Chevron Oronite Company LLC., copy of which is attached herewith). Accordingly, it is submitted that Harrison is not prior art. Thus, withdrawal of the rejection of Claims 3-8, 47-49, 52-54, 57-64, 66-68, 70-72 and 74-79 under 35 U.S.C. §103 (a) is warranted and such is respectfully requested.

Appln. No. 10/608,512
Amdt. dated August 26, 2005
Reply to Office Action dated April 29, 2005

For the foregoing reasons, Claims 1-21, 47-49, 52-54, 57-64, 66-68, 70-72 and 74-79 as presented herein are believed to be in condition for allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink that reads "Michael E. Carmen". The signature is written in a cursive, flowing style.

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